

## THREE NEW SPECIES OF *Scymnus* KUGELANN FROM CHINA (COLEOPTERA: COCCINELLIDAE)\*

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**Key words:** Coleoptera, Coccinellidae, *Scymnus*, New species

*Scymnus* is the largest genus of the family Coccinellidae, and about 600 species have been known to the world. The *Scymnus* fauna is rich in China. Up to the present, 82 species were recorded from China. However, there are still many species remained unknown. The following are the descriptions of three new species from Yunnan and Hainan, China. The type specimens are deposited in the Insect Collection of South China Agricultural University, Guangzhou.

1. *Scymnus (Pultus) cristiformis* sp. nov. (Fig. 1—6)

♂: Length 1.65 mm, width 1.21 mm.

Body small, oval, moderately convex with pale yellowish white pubescence. Head yellowish brown with reddish brown eyes. Pronotum yellowish brown. Scutellum brown. Elytra dark brown with apical 1/3 yellowish brown, and the border between the dark and pale areas is obscure. Underside of body including legs yellowish brown except pterothorax dark brown to black.

Punctuation on head coarser than facets, punctures separated by less than a diameter. Pronotal punctures similar to those on head. Scutellum triangular, wider than long. Elytral punctures slightly coarser than those on pronotum, separated by a diameter; elytron without distinct rows of gross punctures. Prosternal carinae extending to anterior margin, convergent at anterior 2/5, nearly parallel at base, length about 2 times width at base. Postcoxal line complete, curved strongly, extending to 7/10 length of 1st abdominal segment; area surrounded by the line sparsely punctured, smooth along the line. Hind margin of abdominal segment V widely and slightly

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emarginate.

Male genitalia: Sipho relatively stout with indistinct outer process and long inner process of siphonal capsule; sipho nearly straight, only curved at basal  $1/3$ ; preapex of sipho with a membranous extension; apex of sipho S-shaped. Median piece slightly curved and broad at basal half in lateral aspect, and tapering to tip gradually in ventral view; lateral lobes equal to median piece in length.

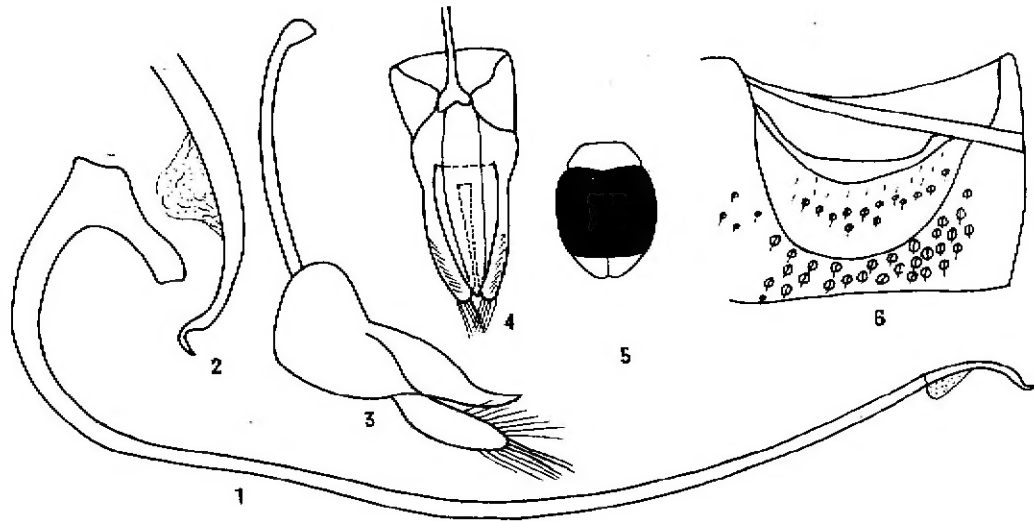


Fig. 1-6 *Scymnus (Pullus) cristiformis* sp. nov.

1. sipho; 2. apex of sipho; 3. tegmen, lateral aspect; 4. tegmen, ventral aspect;  
5. outline of the body; 6. 1st abdominal segment.

Holotype: ♂, No. 91105-2, Yunnan (Jinghong,  $22.0^{\circ}$  N,  $100.8^{\circ}$  E), IV. 12. 1981, Li Fasheng leg.

Remarks: This species resembles *S. (P.) yangi* Yu et Pang, 1993 [= *S. (P.) bicolor* Yang, 1978, nec. Philippi, 1854] and *S. (P.) koebelei* (Pang et Gordon, 1986) in outline, but could be easily distinguished from the latter two by characters of male genitalia.

2. *Scymnus (Pullus) scalpratus* sp. nov. (Fig. 7-13)

♂: Length 2.12 mm, width 1.41 mm.

Form oblongate oval in outline, dorsal surface moderately convex with short yellowish white pubescence. Head brown with black eyes. Pronotum reddish brown. Scutellum dark brown. Elytra black with posterior  $1/5$  brown. Prosternum brown. Venter of pterothorax black with dark brown mesepisternum and mesepimeron. Underside of abdomen brown.

Punctuation on head very dense, almost contiguous, punctures slightly larger

than facets. Pronotal punctures slightly finer than those on head, separated by 0.5–1.0 time a diameter. Elytra irregularly punctured with two types of punctures, the larger ones separated by 0.5–1.0 time a diameter; two rows of gross punctures forming sutural striae, extending to  $1/3$  elytral length. Prosternum with intercoxal carinae

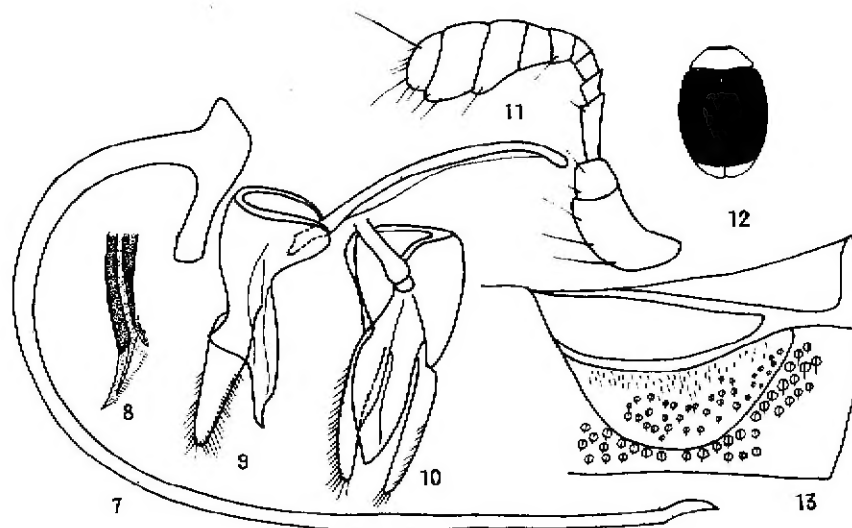


Fig. 7–13 *Scymnus (Pullus) scalpratus* sp. nov.

7. siphus; 8. apex of siphus; 9. tegmen, lateral aspect; 10. tegmen, ventral aspect;  
11. antenna; 12. outline of the body; 13. 1st abdominal segment

extending to anterior margin, strongly convergent at basal half and nearly parallel at anterior half, length about 2.5 times width at base. Postcoxal line of 1st abdominal segment complete, extending to  $3/4$  length of the segment. Area surrounded by postcoxal line irregularly punctured, coarser at posterior half, narrowly smooth along postcoxal line. Fifth abdominal segment apically emarginate moderately at middle.

Male genitalia: Siphus relatively slender, with distinctly long inner process and stout outer process of siphonal capsule. Apex of siphus scoop-like toward outside. Tegmen moderately stout, with lateral lobes distinctly longer than median piece. Median piece strongly raised at basal half in ventral aspect.

Holotype: ♂, No. 900301–10, Hainan (Jianfengling,  $18.7^{\circ}$  N,  $108.8^{\circ}$  E), X. 31.1986, Zhang Jian leg.

Allotype: ♀, Jianfengling, XI. 13. 1989, Ren Shunxiang leg.

Paratypes: 4♂♂ 3♀♀, same data as allotype; 5♂♂ 1♀, Jianfengling, XI. 11.1989, Ren Shunxiang leg.; 2♂♂, Jianfengling, XI. 12.1989, Ou Zhuangzhe leg.; 1♂ 1♀, Limushan ( $19.0^{\circ}$  N,  $109.4^{\circ}$  E), XI.10.1989, Ren Shunxiang leg, all

from Hainan.

Remarks: There are several species with median pieces raising at basal half from China, for example, *klapperichi*, *fujianensis*, *oestocraerus*, *toxosiphonius* and *hingstoni* (Pang *et al.*, 1986; Pang *et al.*, 1985; 1986; Kapur, 1963), but the present species is easily separable from the latter five by the larger punctured area surrounded by postcoxal line on 1st abdominal segment and the median piece of tegmen, which is distinctly shorter than lateral lobes.

3. *Scymnus (Pullus) scrobiculatus* sp. nov. (Fig. 14–19)

♂: Length 3.18 mm, width 1.88 mm.

Form oblongate oval in outline. Dorsal surface moderately convex with long yellowish white pubescence. Head reddish brown with two dark reddish brown lines on frons, and greyish black eyes. Pronotum reddish brown. Scutellum black with brown centre. Elytra black with posterior 1/6 reddish brown. Venter brown with epipleuron, mes- and metepisternum, mesepimeron and central base of 1st abdominal segment dark brown, and black meso- and metasternum.

Punctuation on head and pronotum coarse and dense, punctures larger than facets, separated by half a diameter. Elytral punctures coarser than those on

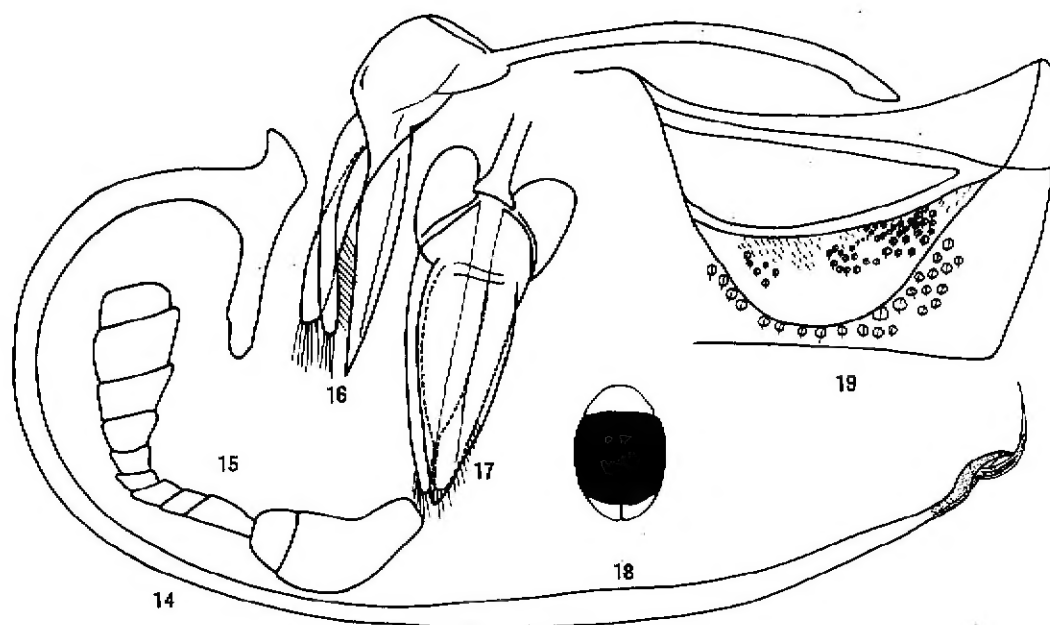


Fig. 14–19 *Scymnus (Pullus) scrobiculatus* sp. nov. 14. siphus; 15. antenna; 16. tegmen, lateral aspect; 17. tegmen, ventral aspect; 18. outline of the body; 19. 1st abdominal segment

pronotum, separated by a diameter, two rows of gross punctures forming sutural

striae, extending to  $1/3$  elytral length. Prosternum with intercoxal carinae extending to anterior margin, very slightly convergent anteriorly, length about 3 times width at base. Postcoxal line complete, extending to about  $5/6$  length of 1st abdominal segment. Area surrounded by postcoxal line irregularly punctured, coarser at latero-basal corner, smooth at posterior half. Fifth abdominal segment slightly emarginate apically.

Male genitalia: Siphon stout, with long inner process and short outer process of sipnol capsule. Apex of siphon distinctly curved with a thread-like appendix at outside. Tegmen moderately slender, with nearly straight median piece tapering to tip and slightly emarginate at base in lateral aspect. Lateral lobes slender, shorter than median piece.

Holotype: ♂, No. 900301-6, Hainan (Jianfengling,  $18.7^{\circ}$  N,  $108.8^{\circ}$  E), X. 31.1986, Zhang Jian leg.

Remarks: This new species is large in size, and resembles *S. (P.) tegminalis* Hoang, 1985 and *S. (P.) shixingicus* Yu et Pang, 1992, but is distinguished from the latter two by the nearly straight median piece in lateral aspect, which is distinctly longer than the slender lateral lobes.

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293-298

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## 中国小毛瓢虫属三新种记述

(鞘翅目: 瓢虫科)

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Q969-496-8

A 摘要 本文描述了小毛瓢虫属 3 新种: 采自云南的冠端小瓢虫 *Scymnus (Pullus) cristiformis* sp. n., 以及采自海南的匙叶小瓢虫 *S. (P.) scalpratus* sp. n. 和凹叶小瓢虫 *S. (P.) scrobiculatus* sp. n. 模式标本存华南农业大学昆虫标本室, 广州。

关键词: 鞘翅目, 瓢虫科, 小毛瓢虫属, 新种

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